

**We Claim**

1. A process for operating on an incoming optical signal having a first state of polarization to produce an outgoing optical signal having a second state of polarization different from said first state and further processing said outgoing signal, said process comprising the steps of introducing said incoming signal to a series of sequences, said sequences being Type I sequences, Type II sequences, or a combination of Type I and Type II sequences; controlling said sequences to operate without reset; and further processing said outgoing signal.

2. The process of claim 1 wherein components of said sequences are formed of silicon based materials.

3. The process of claim 1 wherein said series of sequences comprises three sequences.

4. The process of claim 3 wherein said series of sequences comprises a Type I sequence followed by two Type II sequences.

5. The process of claim 3 wherein said series of sequences comprises a Type II sequence followed by two Type II sequences.

6. The process of claim 1 wherein said series of sequences comprises four sequences.

7. The process of claim 6 wherein said series comprises a Type I sequence followed by two Type II sequences followed by a Type I sequence.

8. The process of claim 6 wherein said series comprises a Type II sequence followed by two Type I sequences followed by a Type II sequence.